



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,241	12/22/2003	Gregory Allen O'Neil	RD-28,640-5	6967

7590 11/08/2004

General Electric Company
CRD Patent Docket Rm 4A59
Bldg. K1
P.O. Box 8
Schenectady, NY 12301

EXAMINER

ZALUKAEVA, TATYANA

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/743,241	Applicant(s) O'NEIL ET AL.	
	Examiner Tatyana Zalukaeva	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22,23,36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22,23,36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the Amendment September 1, 2004 all claims directed to a process have been cancelled, and claims directed to a molded article are left pending. The claims 22, 23, 36 and 37 are directed to a product-by-process.

Double Patenting

2. Claims 22, 23, 36 and 37 stand provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 22, 23, 36 and 37 of copending Application No. 10/000,913. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

In their response filed September 1, 2004, Applicants state that since claims 1-21 and 24-35 are cancelled, the double patenting rejection is improper, "since there is no overlap in the claim sets of the two cases". This is not found persuasive, because the claims 22, 23, 36 and 37 currently pending in the instant application do overlap with the claims 22, 23, 36 and 37 of copending Application 10/000,913 in which the claims 22, 23, 36 and 37, although have been withdrawn from consideration, have never been cancelled.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

Art Unit: 1713

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 22, 23, 36 and 37 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McCloskey (U.S.

Art Unit: 1713

6,518,391) or under 35 U.S.C. 102(a) or 102(e) as being anticipated by or in the alternative as obvious over Chatterjee et al (U.S. 6,143,859).

McCloskey discloses a polymer obtained by solid state polymerization of partially crystalline polycarbonate oligomers bearing ester-substituted terminal groups, which occurs at useful reaction rates despite their high level of endcapping. Partially crystalline polycarbonate oligomers having ester substituted terminal groups may be obtained in a single step by reaction of an ester substituted diaryl carbonate such as bis-methyl salicyl carbonate with a dihydroxy aromatic compound such as bisphenol A in the presence of a transesterification catalyst such as sodium hydroxide (abstract). The partially crystalline precursor polycarbonates are well suited to solid state polymerization owing to their **level of crystallinity** and their incorporation of **ester-substituted phenoxy endgroups** which are more reactive in chain growth reactions with **hydroxy endgroups** than are unsubstituted phenoxy endgroups. Unsubstituted phenoxy endgroups are present in partially crystalline precursor polycarbonates derived from dihydroxy aromatic compounds and diaryl carbonates lacking ester substitution, such as diphenyl carbonate (col.3, lines 4-10, especially line 25). The bisphenol A polycarbonate is endcapped with methyl salicylate (col.5, lines 20-35). The solid state polymerization is performed at 120-280°C (col.7, lines 1-12), wherein partially crystalline polycarbonate comprising end groups (as discussed above) is heated with the dihydroxyaromatic compound presented by the structure II in col. 7 (see also lines 13-17 of col.7). The residence time of a solid state polymerization is 0.1-6 hours (col.6,

Art Unit: 1713

lines 21,22, col.9, lines 10-25, see also Examples 1-9 for the order of operations in the solid state polymerization procedure.). Table 1 of col.13 crystalline methyl salicylate endcapped oligomers with specific degree of crystallinity.

Chatterjee discloses copolycarbonates containing such structural units as birefringence-reducing or "soft block" units that are prepared by conducting a reaction, such as melt polymerization or equilibration, between a precursor polycarbonate and a monomer, polycarbonate oligomer or high molecular weight polycarbonate which is a source of other structural units. The crystallinity of the resulting precursor copolycarbonate or one of the reagents employed in its preparation is enhanced, and the precursor copolycarbonate is subjected to solid state polymerization (abstract).

Component (B) is defined in col.3, lines 15-25 and fits the definition of claim 1.

Component (A) is a precursor polycarbonate. Endcapped polycarbonate A is described in col. 2, lines 41-50

Because of the nature of product-by process claims, the Examiner cannot ordinarily focus on the precise difference between the claimed product and the disclosed product.

It is then Applicants' burden to prove that an unobvious difference exists. See *In re Marosi*, 218 USPQ 289, 292-293 (CAFC 1983).

See also footnote 11 O.G. Notice 1162 59-61, wherein a 35 USC 102/103 rejection is authorized in the case of product-by-process claims because the exact identity of the claimed product or the prior art product cannot be determined by the Examiner.

In re Thorpe, 227 USPQ 964 (CAFC 1985) the Examiner rejected product-by-process claims over a product, which although prepared in a different manner, appeared to be

Art Unit: 1713

the same (prima facie) as the claimed product. In the instant case both the polymer and the process of its making are substantially the same in both references as in the instant claims, and therefore, the polymer is fully capable of being molded into molded article.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713



November 1/04